

10/659,778

FIS919990263US2

20. (Currently Amended) A metallization insulating structure, comprising:
- a substantially planar substrate having wires therein;
 - a first layer, the first layer a substantially fluorine free insulating layer formed on the substrate, having a height, h_i ;
 - a second substantially planar layer having a substantially planar top surface, the second layer a fluorine containing insulating layer formed directly on the first layer, having a height h_f ;
 - a metal structure of at least height $h_i + h_f$ formed in the first and second layer, the metal structure extending to the substrate, the metal structure comprising a line and a via, a bottom of the line and an upper portion of the via contacted by the second layer.
21. (Previously Presented) The metallization insulating structure of claim 20 further comprising a capping layer on the substrate, underlying the first layer.
22. (Previously Presented) The metallization insulating structure according to claim 20 wherein the fluorine containing insulating layer comprises a material selected from the group consisting of fluorinated silicon oxide, fluorinated amorphous carbon, fluorinated diamondlike carbon and fluorinated organic polymers.
23. (Previously Presented) The metallization insulating structure according to claim 20 wherein the substantially fluorine free insulating layer comprises undoped silicon glass.
24. (Previously presented) The metallization insulating structure according to claim 21 wherein the capping layer comprises a material selected from the group consisting of silicon nitride, silicon carbide and hydrogenated silicon carbide, or combinations thereof.

10/659,778

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Claims 25-26 (Cancelled)

27. (Previously presented) The metallization structure of claim 21, wherein the metal structure extends through the capping layer such that the height of the structure is greater than $h_i + h_f$.

Claim 28 (Canceled)

29. (Previously presented) The structure of claim 21 wherein the metal structure is in contact with the underlying wires through the capping layer.
30. (Previously presented) The structure of claim 20, a middle portion of the via contacted by the first layer.
31. (Previously presented) The structure of claim 30, a lower portion of the via contacted by one of the first layer and a capping layer.
32. (Previously presented) The structure of claim 20, the line having a height h_l less than the height of the second layer h_f .
33. (Previously presented) The structure of claim 32, the via having a height h_v greater than the height of the first layer h_i .
34. (Previously presented) The structure of claim 33, the metal structure having a height h_t equivalent to height of the line h_l plus the height of the via h_v .
35. (Previously presented) The structure of claim 34, wherein the height of the first layer h_i is substantially less than the height of the via h_v .